

WHAT IS CLAIMED IS:

- 1 1. A storage library comprising:
2 a frame having an interior and a frame length;
3 a first storage library module having a first set of media element
4 holding cells, the first storage library module being mounted to the frame at a first
5 position along the frame length, the frame supporting the first storage library
6 module such that the first set of cells are positioned within the frame interior at the
7 first frame length position and along the periphery of a channel extending within the
8 frame interior through the frame length;
9 a second storage library module having a second set of media element
10 holding cells, the second storage library module being mountable to the frame at a
11 second position along the frame length, the frame supporting the second storage
12 library module when the second storage library module is mounted to the frame such
13 that the second set of cells are positioned within the frame interior at the second
14 frame length position and along the periphery of the channel;
15 a media element handling assembly having a support and a picker
16 assembly, the support being connected to the frame at a third position along the
17 frame length, the picker assembly being movably connected to the support;
18 wherein the first and second storage library modules are void of
19 media element handling assembly hardware for moving the picker assembly through
20 the channel along the frame length;
21 wherein the picker assembly is operable for moving through the
22 channel along the frame length in order to move toward the first frame length
23 position and manipulate media elements held by the first set of cells, and to move
24 toward the second frame length position and manipulate media elements held by the
25 second set of cells when the second storage library module is mounted to the frame.
- 1 2. A storage library comprising:
2 a frame having top and bottom ends and an interior, the top and
3 bottom frame ends being separated by a frame length;

4 a media element handling assembly having a support and a picker
5 assembly, the support being connected to the top frame end, the picker assembly
6 being movably connected to the support;

7 a first storage library module having a first set of media element
8 holding cells, the first storage library module being mounted to the frame beneath
9 the top frame end at a first position along the frame length, the frame supporting the
10 first storage library module such that the first set of cells are positioned within the
11 frame interior at the first frame length position and along the periphery of a channel
12 extending within the frame interior between the top and bottom frame ends through
13 the frame length;

14 a second storage library module having a second set of media element
15 holding cells, the second storage library module being mountable to the frame
16 beneath the top frame end at a second position along the frame length, the frame
17 supporting the second storage library module when the second storage library
18 module is mounted to the frame such that the second set of cells are positioned
19 within the frame interior at the second frame length position and along the periphery
20 of the channel;

21 wherein the first and second storage library modules are void of
22 media element handling assembly hardware for moving the picker assembly through
23 the channel along the frame length;

24 wherein the picker assembly is operable for moving through the
25 channel along the frame length between the top and bottom frame ends in order to
26 move toward the first frame length position and manipulate media elements held by
27 the first set of cells, and to move toward the second frame length position and
28 manipulate media elements held by the second set of cells when the second storage
29 library module is mounted to the frame.

1 3. The library of claim 2 further comprising:

2 a third storage library module having a media element player and
3 being void of media element handling assembly hardware for moving the picker
4 assembly through the channel along the frame length, the third storage library
5 module being mountable to the frame beneath the top frame end at a third position
6 along the frame length, the frame supporting the third storage library module when

7 the third storage library module is mounted to the frame such that the media element
8 player is positioned within the frame interior at the third frame length position and
9 along the periphery of the channel;

10 wherein the picker assembly is operable for moving through the
11 channel in order to move toward the first and third frame length positions and load
12 media elements held by the first set of cells into the media element player when the
13 third storage library module is mounted to the frame.

1 4. A storage library comprising:

2 a frame having top and bottom ends and an interior, the top and
3 bottom frame ends being separated by a frame length;

4 a first storage library module having a first set of media element
5 holding cells, the first storage library module being mounted to the frame beneath
6 the top frame end at a first position along the frame length, the frame supporting the
7 first storage library module such that the first set of cells are positioned within the
8 frame interior at the first frame length position and along the periphery of a channel
9 extending within the frame interior between the top and bottom frame ends through
10 the frame length; and

11 a media element handling assembly having a support and a picker
12 assembly, the support being connected to the top frame end, the picker assembly
13 being movably connected to the support such that the picker assembly is operable
14 for moving through the channel along the frame length between the top and bottom
15 frame ends in order to move toward the first frame length position and manipulate
16 media elements held by the first set of cells while being connected to the support.

1 5. The library of claim 4 wherein:

2 the first storage library module is void of media element handling
3 assembly hardware for moving the picker assembly through the channel.

1 6. The library of claim 4 further comprising:

2 a second storage library module having a second set of media element
3 holding cells, the second storage library module being mountable to the frame
4 beneath the top frame end at a second position along the frame length, the frame

5 supporting the second storage library module when the second storage library is
6 mounted to the frame such that the second set of cells are positioned within the
7 frame interior at the second frame length position and along the periphery of the
8 channel;

9 wherein the picker assembly is operable for moving through the
10 channel along the frame length between the top and bottom frame ends in order to
11 move toward the second frame length position and manipulate media elements held
12 by the second set of cells while being connected to the support when the second
13 storage library module is mounted to the frame.

1 7. The library of claim 6 wherein:
2 the second storage library module is void of media element handling
3 assembly hardware for moving the picker assembly through the channel.

1 8. The library of claim 6 wherein:
2 the first storage library module further includes a first media player,
3 the frame supporting the first storage library module such that the first media player
4 is positioned within the frame interior at the first frame length position on the
5 periphery of the channel;
6 wherein the picker assembly is operable for moving through the
7 channel in order to move toward the first and second frame length positions and load
8 media elements held by the first and second sets of cells into the first media player
9 while being connected to the support when the second storage library module is
10 mounted to the frame.

1 9. The library of claim 4 wherein:
2 the media element handling assembly further includes a platform and
3 a suspension drive mechanism, the suspension drive mechanism being connected to
4 the support, the platform being movably connected to the suspension drive
5 mechanism and the picker assembly being supported on the platform, wherein the
6 suspension drive mechanism movably suspends the platform away from the support
7 in order to move the picker assembly through the channel along the frame length
8 from the top frame end to the bottom frame end.

1 10. The library of claim 9 wherein:
2 the suspension drive mechanism movably retracts the platform back
3 towards the support in order to move the picker assembly through the channel along
4 the frame length from the bottom frame end to the top frame end.

1 11. The library of claim 9 wherein:
2 the platform includes a carriage assembly operable for moving the
3 picker assembly across the platform.

1 12. The library of claim 9 wherein:
2 the picker assembly is rotatably supported on the platform.

1 13. The library of claim 9 wherein:
2 the media element handling assembly further includes a
3 communication cable connected at one end to the picker assembly via the platform
4 and connected at the other end to the support, the communication cable being
5 operable to suspend out from the support as the platform moves away from the
6 support, the communication cable enabling communication with the picker
7 assembly.

1 14. The library of claim 10 wherein:
2 the suspension drive mechanism includes suspension cables connected
3 to the platform for movably suspending the platform away and toward the support.

1 15. The library of claim 10 wherein:
2 the suspension drive mechanism includes scissor legs connected to the
3 platform for movably suspending the platform away and toward the support.
4 support.

1 16. The library of claim 4 wherein:
2 the top and bottom frame ends are vertically separated by the frame
3 length.

1 17. A storage library comprising:
2 a frame having top and bottom ends and an interior, the top and
3 bottom frame ends being separated by a frame length;
4 a media element handling assembly having a support and a picker
5 assembly, the support being connected to the bottom frame end, the picker assembly
6 being movably connected to the support;
7 a first storage library module having a first set of media element
8 holding cells, the first storage library module being mounted to the frame above the
9 bottom frame end at a first position along the frame length, the frame supporting the
10 first storage library module such that the first set of cells are positioned within the
11 frame interior at the first frame length position and along the periphery of a channel
12 extending within the frame interior between the top and bottom frame ends through
13 the frame length;
14 a second storage library module having a second set of media element
15 holding cells, the second storage library module being mountable to the frame above
16 the bottom frame end at a second position along the frame length, the frame
17 supporting the second storage library module when the second storage library
18 module is mounted to the frame such that the second set of cells are positioned
19 within the frame interior at the second frame length position and along the periphery
20 of the channel;
21 wherein the first and second storage library modules are void of
22 media element handling assembly hardware for moving the picker assembly through
23 the channel along the frame length;
24 wherein the picker assembly is operable for moving through the
25 channel along the frame length between the top and bottom frame ends in order to
26 move toward the first frame length position and manipulate media elements held by
27 the first set of cells, and in order to move toward the second frame length position
28 and manipulate media elements held by the second set of cells when the second
29 storage library module is mounted to the frame.

1 18. A method for a storage library having a frame with an interior
2 and a frame length, the storage library further having a media element handling

3 assembly having a support and a picker assembly movably connected to the support
4 with the support being connected to the frame, the method comprising:
5 mounting a first storage library module having a first set of media
6 element holding cells to the frame at a first position along the frame length away
7 from the support such that the first set of cells are positioned within the frame
8 interior at the first frame length position and along the periphery of a channel
9 extending within the frame interior through the frame length;
10 moving the picker assembly through the channel along the frame
11 length in order to move the picker assembly toward the first set of cells for the
12 picker assembly to manipulate media elements held by the first set of cells while the
13 picker assembly is movably connected to the support;
14 after the picker assembly has manipulated a media element held by
15 one of the first set of cells, expanding the capacity of the storage library by
16 mounting a second storage library module having a second set of media element
17 holding cells to the frame at a second position along the frame length away from the
18 support such that the second set of cells are positioned within the frame interior at
19 the second frame length position and along the periphery of the channel; and
20 moving the picker assembly through the channel along the frame
21 length in order to move the picker assembly toward the second set of cells for the
22 picker assembly to manipulate media elements held by the second set of cells while
23 the picker assembly is movably connected to the support.

1 19. The method of claim 18 further comprising:
2 after the picker assembly has manipulated a media element held by
3 one of the second set of cells, expanding the capacity of the storage library further
4 by mounting a third storage library module having a third set of media element
5 holding cells to the frame at a third position along the frame length away from the
6 support such that the third set of cells are positioned within the frame interior at the
7 third frame length position and along the periphery of the channel; and
8 moving the picker assembly through the channel along the frame
9 length in order to move the picker assembly toward the third set of cells for the
10 picker assembly to manipulate media elements held by the third set of cells while the
11 picker assembly is movably connected to the support.

1 20. The method of claim 18 further comprising:
2 after the picker assembly has manipulated a media element held by
3 one of the first set of cells, reducing the capacity of the storage library by
4 dismounting one of the first and second storage library modules from the frame; and
5 moving the picker assembly through the channel along the frame
6 length in order to move the picker assembly toward the set of cells remaining within
7 the frame interior for the picker assembly to manipulate media elements held by the
8 remaining set of cells while the picker assembly is movably connected to the
9 support.